

WHAT IS CLAIMED IS:

1. A security control apparatus comprising:
a security device;
a control apparatus responsive to security
5 codes for enabling and disabling the security device;
a security code source unit for communicating
security codes to the control apparatus, the security
code source unit having a user controlled keypad and a
voice analysis apparatus and including circuitry
10 responsive to the voice analysis apparatus for
communicating to the control apparatus a security code
including a portion representing user interaction with
the security code source unit.
- 15 2. A security control apparatus in accordance with
claim 1, wherein the voice analysis apparatus comprises a
speaker dependent voice analysis arrangement and a
speaker independent voice analysis arrangement.
- 20 3. A security control apparatus in accordance with
claim 1, wherein the security code source unit comprises
memory for storing a pass code entered by a user in
association with representations of speech generated by
the voice analysis apparatus.
- 25 4. A security control apparatus in accordance with
claim 3, wherein the circuitry for communicating responds
to predetermined comparison characteristics between a
stored speech representation and a spoken speech
30 representation for communicating a security code.
5. A security control apparatus in accordance with
claim 3, wherein a security code communicated to the
control apparatus comprises a pass code entered by user
35 interaction with the keypad.
6. A security control apparatus in accordance with
claim 3, wherein a security code communicated to the

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control apparatus comprises a pass code entered via the voice analysis apparatus.

7. A security control system comprising:

5 a speaker dependent voice analysis arrangement for indicating security approval or non-approval based on commands being spoken by a user;

a speaker independent voice analysis arrangement operative when the speaker dependent voice analysis arrangement indicates non-approval for providing speech analysis information based upon words being spoken by the user; and

10 security control apparatus responsive to representations of an indication of security approval by the speaker dependent voice analysis arrangement for generating a security approval signal or responsive to representations of speaker independent voice analysis information for generating a security approval signal.

20 8. A security control system in accordance with claim 7, comprising:

apparatus responsive to speaker dependent security approval for transmitting a security code comprising a predetermined passcode to the barrier movement apparatus and the security control apparatus comprises apparatus for generating the security signal in response to the predetermined passcode.

30 9. A security control system in accordance with claim 8, wherein the words spoken by the user comprise a passcode and the speaker independent voice analysis arrangement identifies the passcode and transmits the identified passcode to the security control apparatus.

35 10. A security control system in accordance with claim 7, comprising apparatus operative during a learn mode for storing speech representations of a first user's voice speaking the commands;

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memory for storing the speech representations.

11. A security control system in accordance with claim 7, wherein the speaker dependent voice analysis apparatus is adapted to receive input representing a passcode and apparatus for storing the passcode representations input by the user in association with the stored speech representations.

12. A security code transmitter comprising:
a keypad responsive to user interaction for generating a pass code;
a voice analysis arrangement responsive to spoken commands for transmitting security codes including the pass code;
a cover mounted on the security code transmitter; and
apparatus responsive to force applied to the cover for enabling the voice analysis arrangement.

13. A security code transmitter in accordance with claim 12 wherein the cover is movably mounted on the transmitter and the apparatus responsive to forces applied to the cover comprises a switch.

14. A security code transmitter in accordance with claim 13, wherein the switch exhibits at least two states and is disposed on the security code transmitter in a position to change state when the cover is moved to a position to uncover the keypad.

15. A security code transmitter in accordance with claim 13, wherein the cover comprises a pivoting attachment to the security code transmitter, the pivoting attachment permitting an open position where the keypad is accessible to the user, a first closed position in which the keypad is inaccessible to the user and the switch is in a first state and a second closed position

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in which the keypad is inaccessible to the user and the switch is in a second state.

16. A security code transmitter in accordance with
5 claim 15, comprising circuitry responsive to the state of the switch for enabling the voice analysis arrangement.

17. A security code transmitter in accordance with
10 claim 16, wherein the second closed position is farther from the open position than the first closed position and the voice analysis apparatus is enabled when the cover is in the second closed position.

18. A barrier movement apparatus comprising:
15 a control arrangement responsive to security codes for moving the barrier; and
a security code transmitter comprising:
voice analysis apparatus responsive to
spoken commands for sending a security code to the
20 control arrangement upon approval of the command spoken by a user;
a cover having an open and a closed
position;
circuitry responsive to the position of
25 the cover for enabling voice analysis by the voice analysis apparatus.

19. A barrier movement apparatus in accordance
30 with claim 18, wherein the circuitry responsive to the position of the cover comprises an electrical switch.

20. A barrier movement apparatus in accordance
with claim 19, wherein the circuitry for transmitting is
actuated upon movement of the cover to a maximum closed
35 position.

21. A barrier movement apparatus in accordance with
claim 18, wherein the circuitry responsive to the

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position of the cover is enabled for a predetermined period of time after a security code is transmitted.

22. A barrier movement apparatus in accordance with claim 20 wherein the security code transmitter comprises apparatus responsive to a movement of the cover to the maximum closed position while the circuitry responsive to the cover position is enabled for sending a security code to stop barrier movement.

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23. A barrier movement apparatus comprising:
barrier control apparatus responsive to barrier control commands for moving a barrier;
control circuitry responsive to user interaction for generating barrier control commands to control barrier movement, said user interaction comprising security approval before the generation of barrier control commands;
voice analysis arrangement responsive without security approval to at least one predetermined word spoken by a user for generating barrier control commands to change the movement of a barrier.

24. A barrier movement apparatus in accordance with claim 23 wherein the control circuitry enables the voice analysis arrangement for a predetermined period of time after the generation of a barrier control command to respond without security approval to the at least one spoken word to stop a closing barrier.

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25. A barrier movement apparatus in accordance with claim 23, wherein the control circuitry comprises a speaker dependent voice analysis arrangement for granting security approval.

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26. A barrier movement apparatus comprising:
a motor responsive to barrier control commands for operating the barrier;

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a speaker dependent voice analysis apparatus responsive to a first predetermined spoken command from a predetermined speaker for controlling the motor to operate the barrier; and

5 speaker independent voice analysis apparatus responsive to a second spoken command from any speaker for changing barrier movement.

10 27. A barrier movement apparatus according to claim 26, wherein the speaker independent voice analysis apparatus is enabled for a predetermined period of time after the motor is directed to operate the barrier.

15 28. A barrier movement apparatus according to claim 27, wherein the speaker independent voice analysis apparatus is enabled for a predetermined period of time after the motor is controlled to operate the barrier, to reverse barrier movement.

20 29. A barrier movement apparatus according to claim 27, wherein the speaker independent voice analysis apparatus is enabled for a predetermined period of time after the barrier control apparatus is controlled to move the barrier, to stop movement of the barrier.

25 30. A barrier movement apparatus comprising:
a control apparatus responsive to security codes for moving and stopping the barrier;
a speaker dependent voice analysis arrangement
30 responsive to a predetermined command spoken by a predetermined user for communicating a security code to the control apparatus.

35 31. A barrier movement apparatus in accordance with claim 30, wherein the speaker dependent voice analysis arrangement comprises memory for storing a general security code portion and a user specific security code portion in association with indicia of the predetermined

0945080-072504

command spoken by the predetermined user and the communicated security code comprises the general security code portion and a user specific security code portion.

5 32. A barrier movement apparatus in accordance with claim 31, wherein the memory comprises memory locations for storing a plurality of user specific security code portions.

10 33. A barrier movement apparatus in accordance with claim 31, wherein the speaker dependent voice analysis arrangement comprises a keypad for generating a pass code representing user interaction with the keypad and the memory stores the user generated pass code as the user
15 specific security code portion.

20 34. A barrier movement apparatus in accordance with claim 33, comprising apparatus responsive to a voice of the predetermined user for storing a representation of the predetermined user's voice in association with a pass code representing user interaction with the keypad.

25 35. A barrier movement apparatus in accordance with claim 32, wherein the memory comprises a first plurality of locations for storing semipermanent user specific code portions intended to be changed by user interaction and a second plurality of temporary user specific code portions which are intended to be erased upon the occurrence of an event.

30 36. A barrier movement apparatus in accordance with claim 35, wherein the temporary user specific security code portions are erased in response to the passage of a predetermined amount of time.

35 37. A barrier movement apparatus in accordance with claim 35, wherein the temporary user specific

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security code portions are erased in response to a predetermined number of accesses.

38. A barrier movement system comprising:
- 5 barrier movement apparatus responsive to security codes comprising a rolling code portion and a pass code for moving a barrier and;
- a remote code transmitter unit comprising:
- a memory for storing one or more pass
- 10 codes;
- a keypad for user entry of a pass code;
- a voice analysis arrangement responsive to a spoken command for reading a pass code from the memory and;
- 15 rf transmitter circuitry for rf transmitting a security code comprising a rolling code portion and a pass code entered at the keypad or a pass code read from memory.
- 20 39. Barrier movement system in accordance with claim 1, comprising a voice analysis unit for analysis of user spoken words to define a pass code.
40. A method of granting security access
- 25 comprising:
- storing a plurality of representations of a biometric characteristics of one or more persons;
- storing in association with each stored biometric characteristic representation a portion of a
- 30 security code;
- receiving a representation of a biometric characteristic of a person and comparing the received representation with one or more of the stored biometric characteristic representations; and
- 35 transmitting a security code comprising a representation of the security code portion associated with a stored biometric representation identified in the

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comparing as sufficiently similar to the received
biometric characteristic representation.

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